UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/707,723	11/07/2000	Kazuyuki Sakakibara	CTW-006	9799

959 7590 07/09/2003

LAHIVE & COCKFIELD
28 STATE STREET
BOSTON, MA 02109

14

EXAMINER
TSANG FOSTER, SUSY N

ART UNIT	PAPER NUMBER
1745	

DATE MAILED: 07/09/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Offic Action Summary	Application No. 09/707,723	Applicant(s) SAKAKIBARA ET AL.
	Examin r Susy N Tsang-Foster	Art Unit 1745

-- Th MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *16 June 2003* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-28,31-44,47-60 and 63-72* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *8-24* is/are allowed.

6)☒ Claim(s) *1-3,25-28,31-44,47-60 and 63-72* is/are rejected.

7)☒ Claim(s) *4-7* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☒ Interview Summary (PTO-413) Paper No(s). *11* .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Response to Amendment

1. This Office Action is responsive to the after-final amendment filed on 6/16/2003. Claims 29, 30, 45, 46, 61, and 62 have been cancelled. Claims 1-28, 31-44, 47-60, and 63-72 are pending. Claims 8-24 are allowed. Claims 4-7 are objected to. Claims 1-3, 25-28, 31-44, 47-60, and 63-72 are rejected for reasons below. This Office Action is made non-final in view of the new grounds of rejections that are not necessitated by applicants' amendment.

Priority

2. The translation of the foreign priority paper JP 11-321621 filed November 11, 1999 only supports the limitations of instant claims 1-7 and does not support the limitation "radiator means provided in the at least one air passage so as to be in contact with outer surfaces of the cells, the radiator means having portions each of which corresponds to at least one of the cells, wherein the portions have different heat capacities according to the heat load of the corresponding cell" recited in instant claims 8-28, 31-44, 47-60, and 63-72. The translation of foreign priority document JP 2000-293719 filed September 27, 2000 supports the limitations of instant claims 8-28, 31-44, 47-60, and 63-72. Therefore, instant claims 1-7 have the earliest priority date of November 11, 1999 and instant claims 8-28, 31-44, 47-60, and 63-72 have the earliest priority date of September 27, 2000.

Claims Objections

3. In claim 25, the phrase "along branches of the least one air passage" should be "along branches of the at least one air passage".

Duplicate Claims

4. Applicant is advised that should claims 25-28, 31-40 be found allowable, claims 41-44, 47-60, and 63-72 will be objected to under 37 CFR 1.75 as being a substantial duplicate thereof. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

It is noted that in claim 25, the limitation "wherein the heat capacity of each portion of the radiator means is determined by the area of contact of the portion with the corresponding cell" is equivalent to the limitations "wherein the heat capacity of each portion of the radiator means is determined by the thickness of the portion" and "wherein the heat capacity of each said portion of the radiator means is determined by the material of the portion" in claims 41 and 57 respectively because the heat capacity of a portion is inherently determined by the combination of the area of contact of the portion, the thickness of the portion and the material of the portion.

It is unclear to the Examiner how the factors that determine that heat capacity of a component such as the thickness, material, and area of contact can be isolated from one another. Furthermore, it is unclear to the Examiner how the heat capacity of the radiator plate of the first

cell group can be compared with the heat capacity of the radiator plate of the second cell group when there are several factors to consider in determining the heat capacity. For example, in Figure 13, it is noted that the area of contact of the radiator plate for the first cell group in the center of the battery pack is greater than any area of contact of the radiator plate for the second cell group yet the heat capacity of the portions of the radiator plate for the cells of the corresponding first cell group is less than the heat capacity of the portions of the radiator plate for the cells of the corresponding second cell group because the material of the second cell group has a higher heat capacity per unit volume than that of the material of the first cell group.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

6. Claims 25-28, 31-44, 47-60, and 63-72 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

In claim 25 and dependent claims thereof, the limitation "the radiator means having a plurality of portions each corresponding to each of the cells to form a plurality of radiator plates having different heat capacities" does not appear to be in the original disclosure.

In claim 41 and dependent claims thereof, the limitation "the radiator means having a plurality of portions each corresponding to each of the cells to form a plurality of radiator plates having different heat capacities" does not appear to be in the original disclosure.

In claim 57 and dependent claims thereof, the limitation "wherein the portions have different heat capacities according to a heat load of the corresponding cell to form a plurality of radiator plates having different heat capacities" does not appear to be in the original disclosure.

7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

8. Claims 25-28, 31-44, 47-60, and 63-72 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 25 and dependent claims thereof, the limitation "each said first and second cell group including at least one cell and having a heat load distinct from the others" is indefinite because it is unclear what the "others" are.

In claim 41 and dependent claims thereof, the limitation "each said first and second cell group including at least one cell and having a heat load distinct from the others" is indefinite because it is unclear what the "others" are.

In claim 57 and dependent claims thereof, the limitation "each said first and second cell group including at least one cell and having a heat load distinct from the others" is indefinite because it is unclear what the "others" are.

Claim Rejections - 35 USC § 102

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

10. Claims 1 and 2 are rejected under 35 U.S.C. 102(e) as being anticipated by Sugiura et al. (US 6,537,694 B1).

The applied reference has a common inventor and assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

With respect to claim 1, Sugiura et al. discloses a battery comprising a case 20 (see Figure 1) containing a plurality of cells 4 (see Figure 2), an air passage 32 (see Figure 5) formed within the case for allowing cooling air outside the case to enter the case and to pass along the cells and exit from the case, and a U-shaped radiator 9 (see Figure 3) provided in the air passage 32 is in contact with more than one outer surfaces of the cells 4 (see Figure 2), and the heat capacity of the radiator increases in the downstream direction of a flow of the cooling air as

shown in Figures 5 and 6 where a plurality of fins 10 are present in a downstream direction of the flow of cooling air.

With respect to claim 2, the plurality of fins 10 increases the surface area and the volume of the radiator in the downstream direction of the flow of the cooling air (see Figure 6).

Double Patenting

11. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970);and, *In re Thorington,* 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

12. Claims 1-3 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 8 of U.S. Patent No. 6,566,005 B1. Although the conflicting claims are not identical, they are not patentably distinct from each other because claim 8 of the patent encompasses and anticipates all the limitations of claims 1-3 of the present case.

Allowable Subject Matter

13. Claim 8-24 are allowed.

14. Claims 4-7 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

Any inquiry concerning this communication or earlier communications should be directed to examiner Susy Tsang-Foster, Ph.D. whose telephone number is (703) 305-0588. The examiner can normally be reached on Monday through Thursday from 9:30 AM to 8:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Ryan can be reached at (703) 308-2383. The phone number for the organization where this application or proceeding is assigned is (703) 305-5900.

The fax phone numbers for the organization where this application or proceeding is assigned is (703) 872-9310 for regular communications and (703) 872-9311 for After-Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

st/3 July 2003

Susy Tsang Foster